Modeling of DCC Gate Operations

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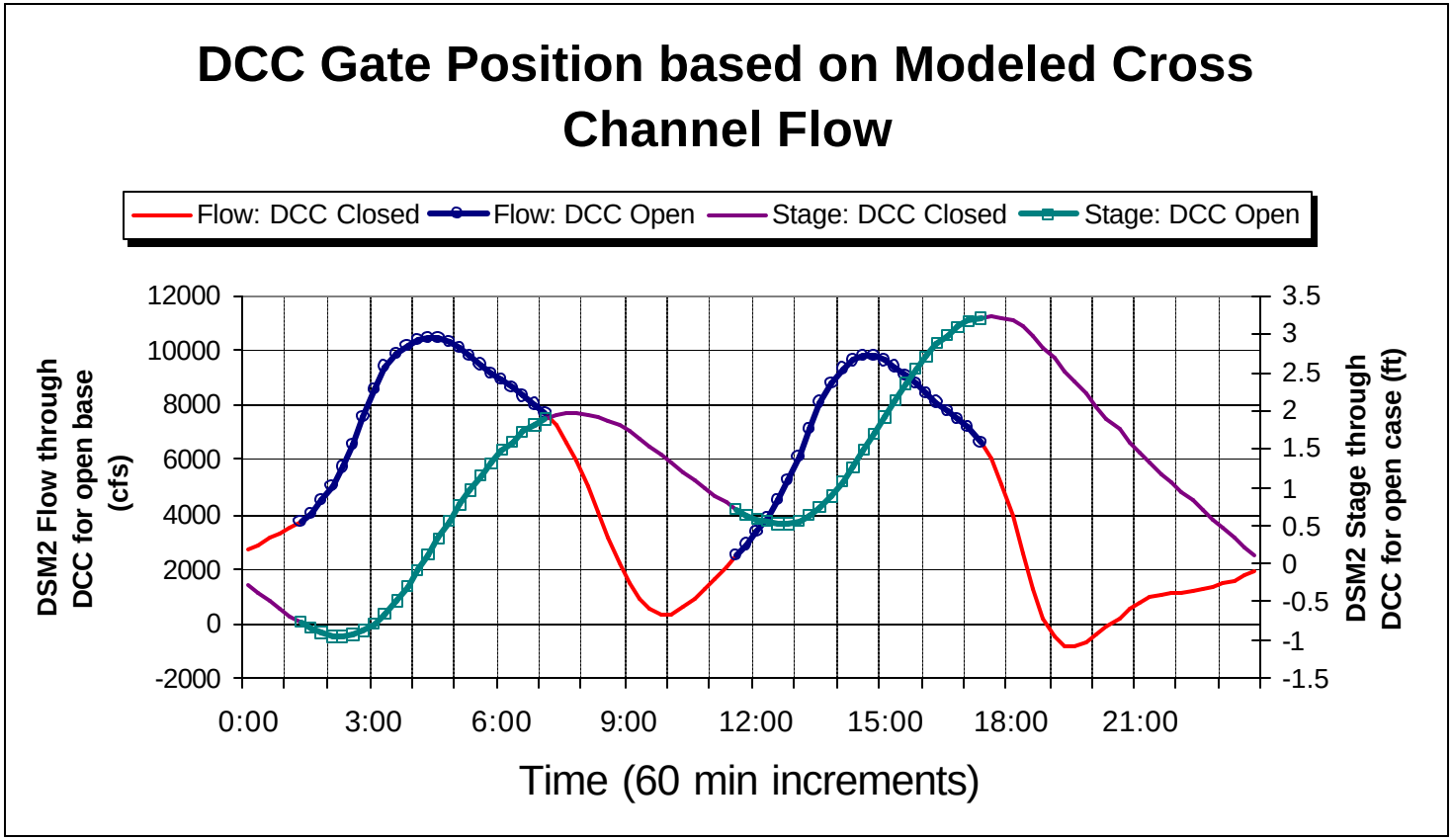
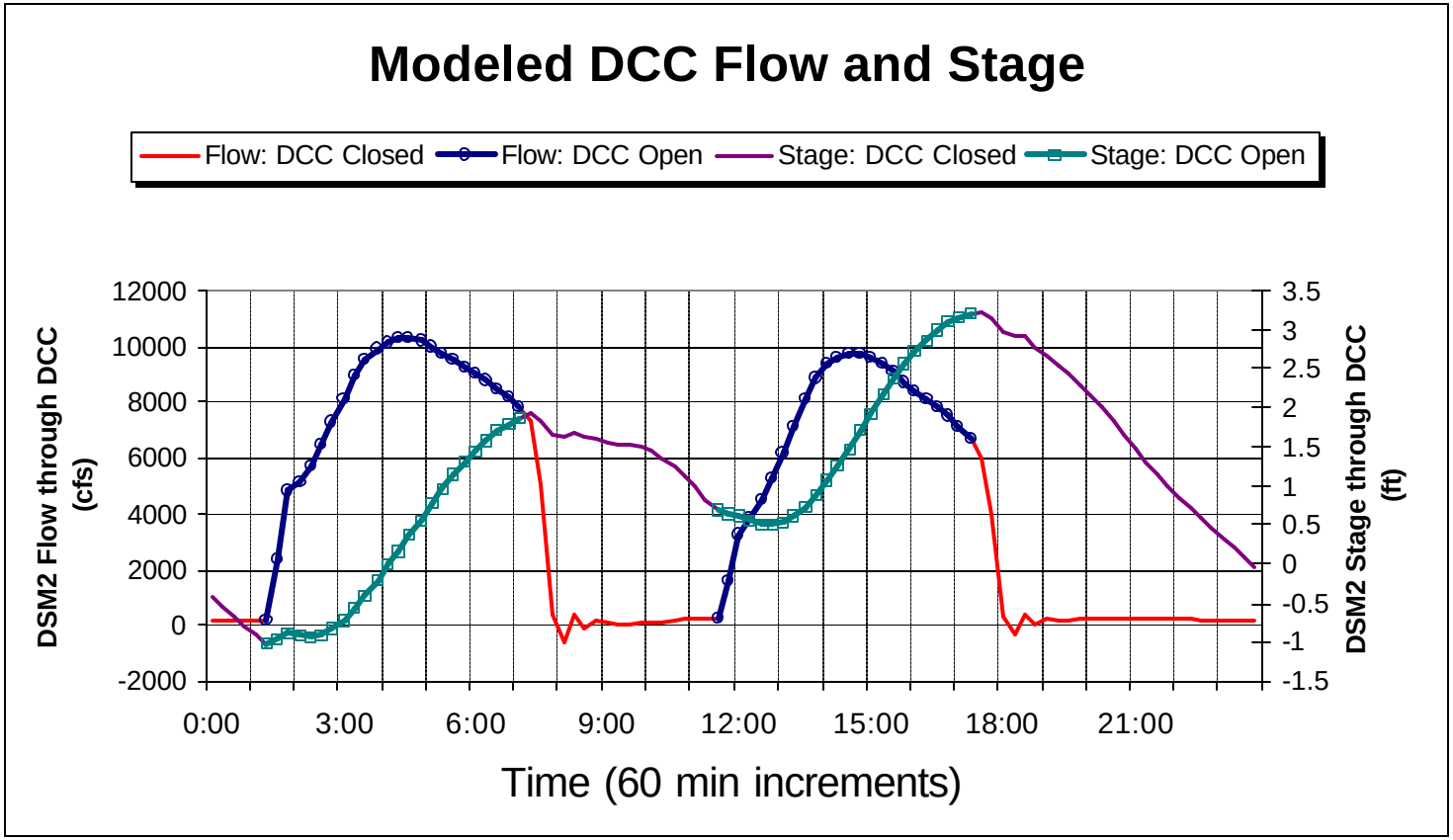
DCC Operation: Nov 26 -- Dec 14

Run Description	*Percent Time DCC Open*
Historical DCC Operation	0%
DCC Open on Max DCC Flow during Spring Tide	25%
DCC Open on Max DCC Flow	50%
DCC Open Entire Simulation	100%

DCC Operation from “Open Case”



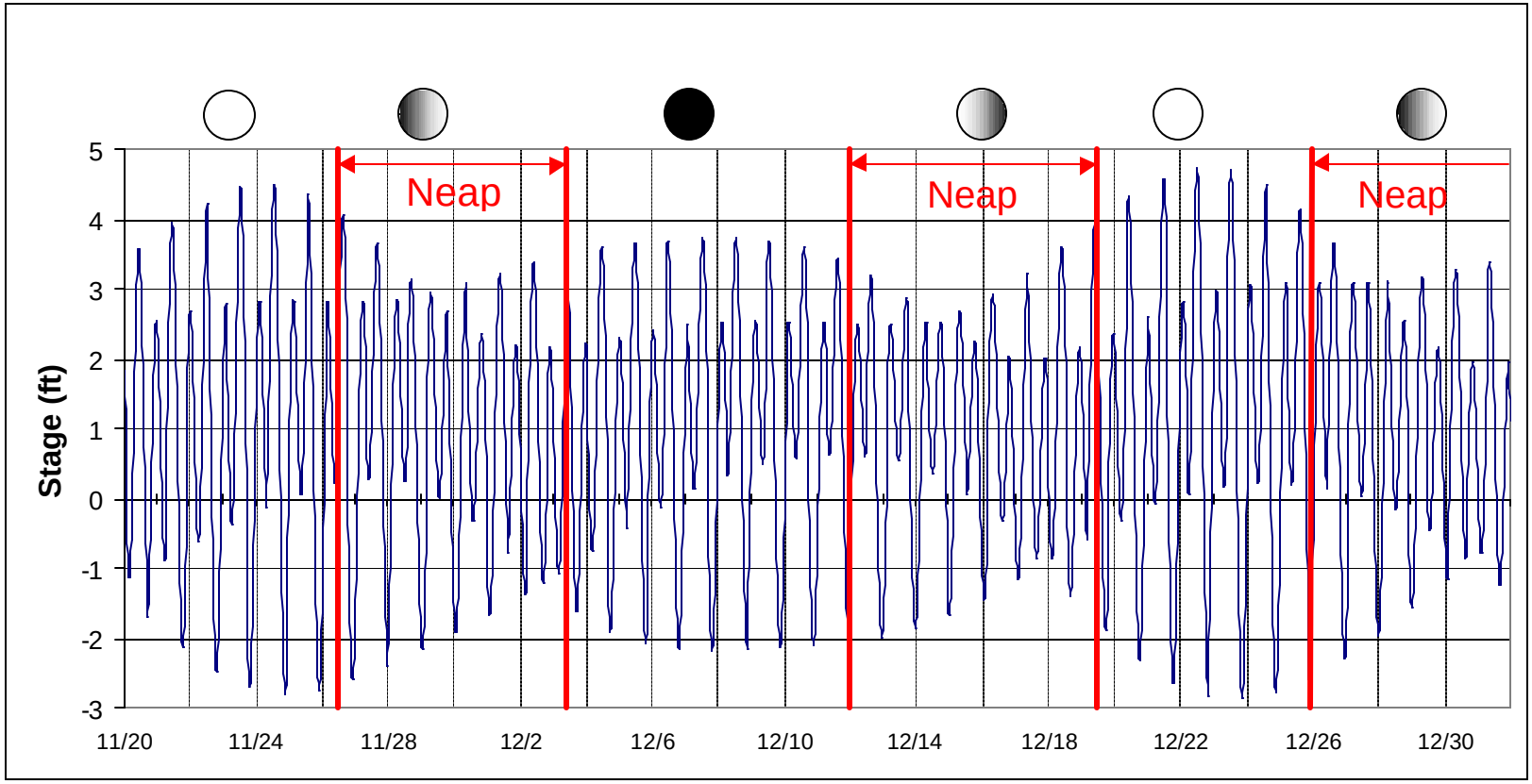
DCC Operation from "Variable Case"



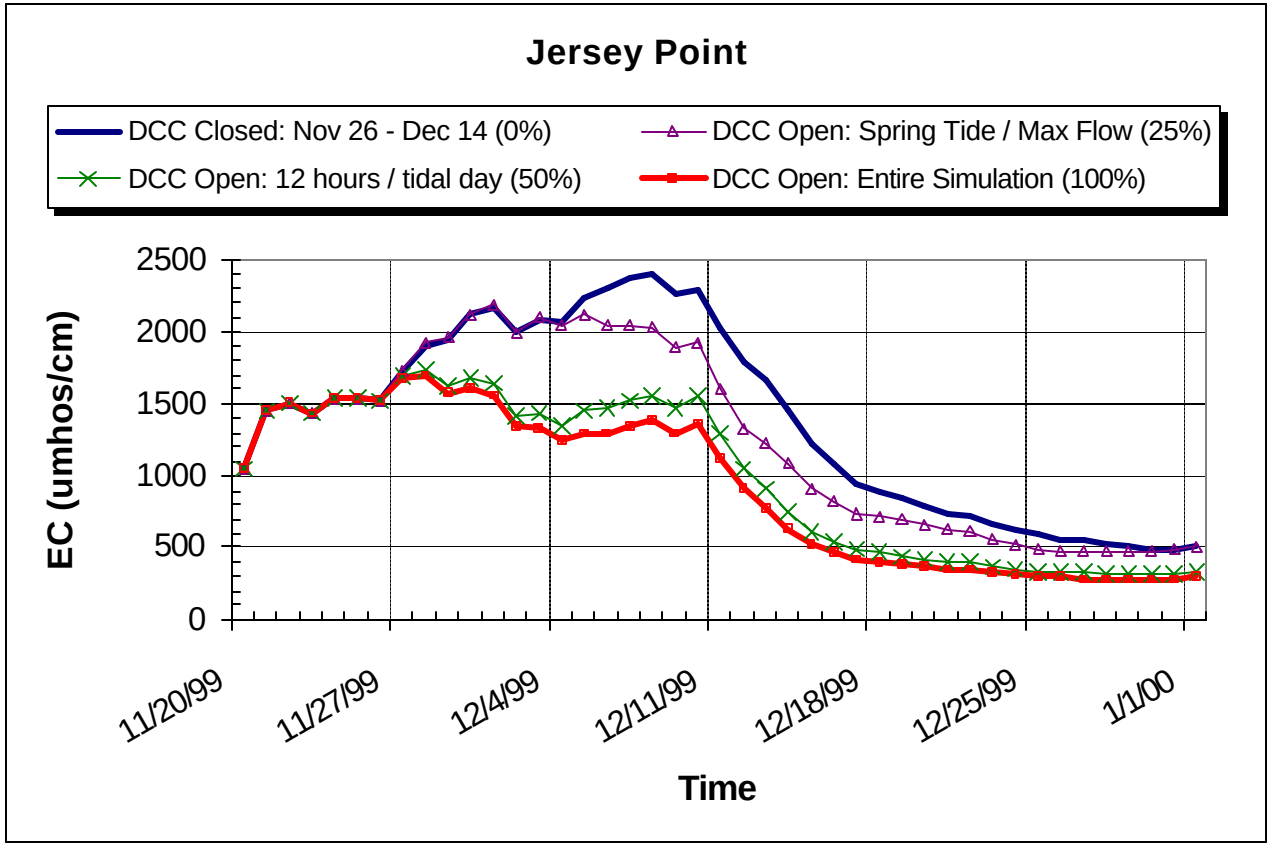
Spring / Neap Tides

- Neap Tide (Quarter Moons):
  - DCC Closed Entire Time
- Spring Tide (Full & New Moons):
  - DCC Opened for Max DCC Flow
  - DCC Closed all other times

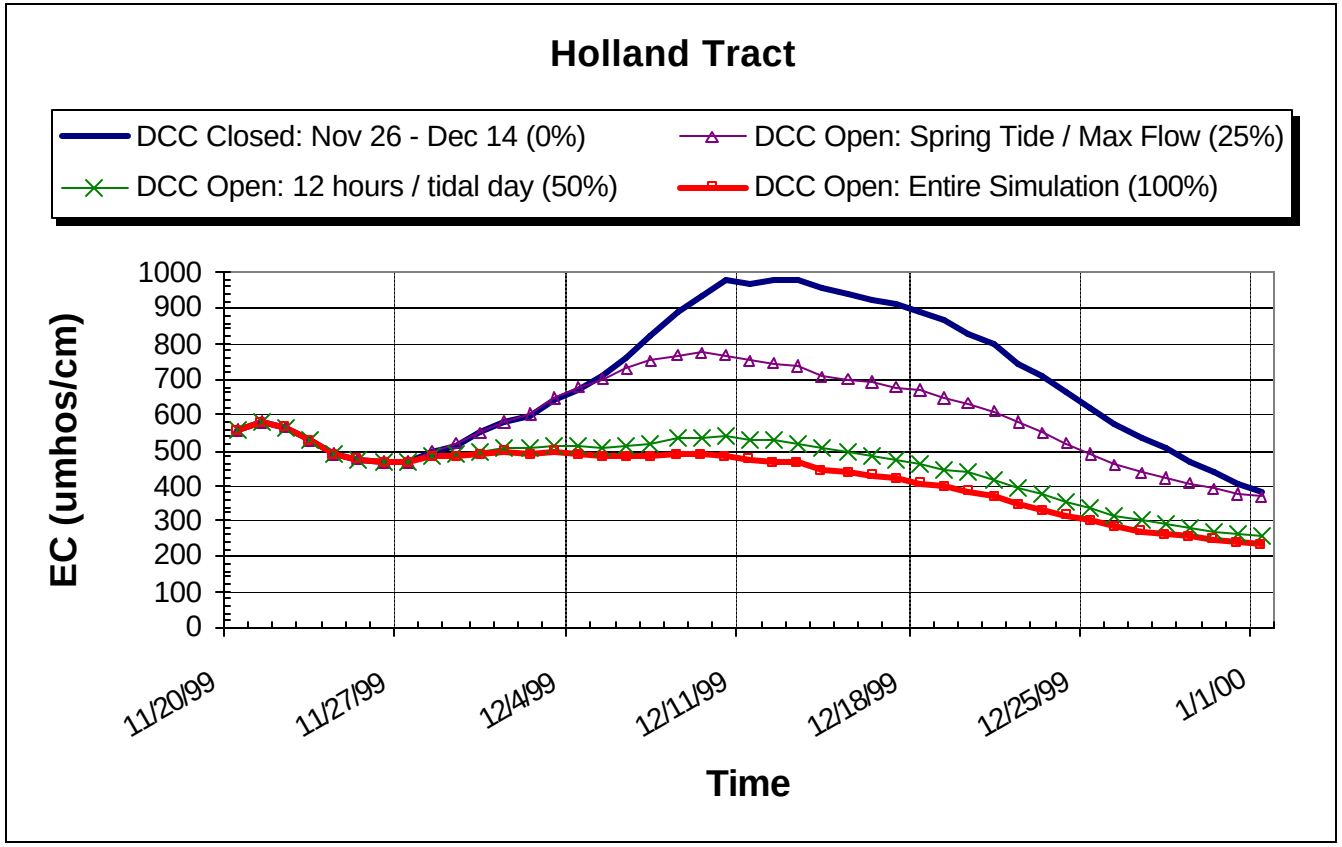
Spring / Neap Tides at Mallard



DSM2 Results



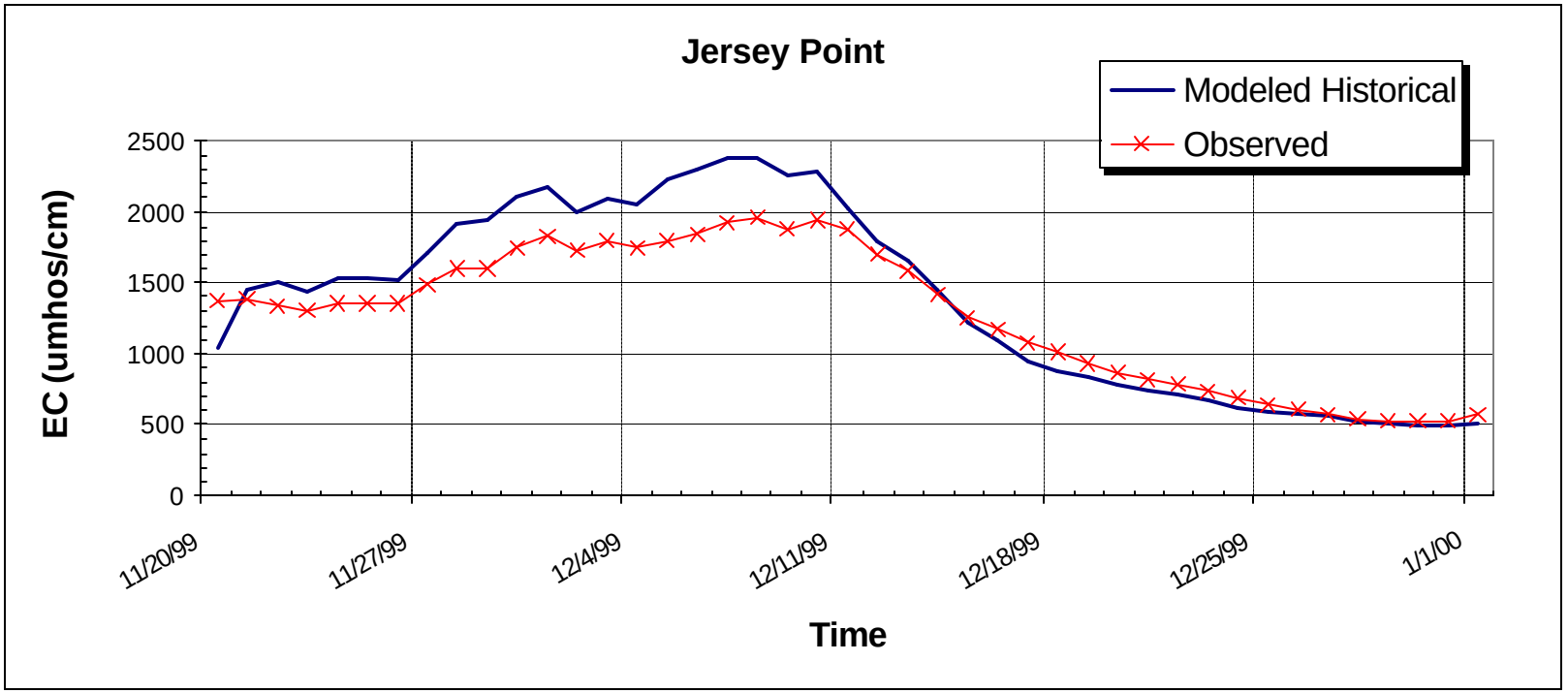
DSM2 Results



Conclusions

- Timing of DCC operation is critical to EC levels in delta.
- Opening DCC for 12 hours / tidal day can result in nearly same EC as opening DCC 100% of the time.
- High EC levels are difficult to “flush” out.

Model -vs- Observed



Model -vs- Observed